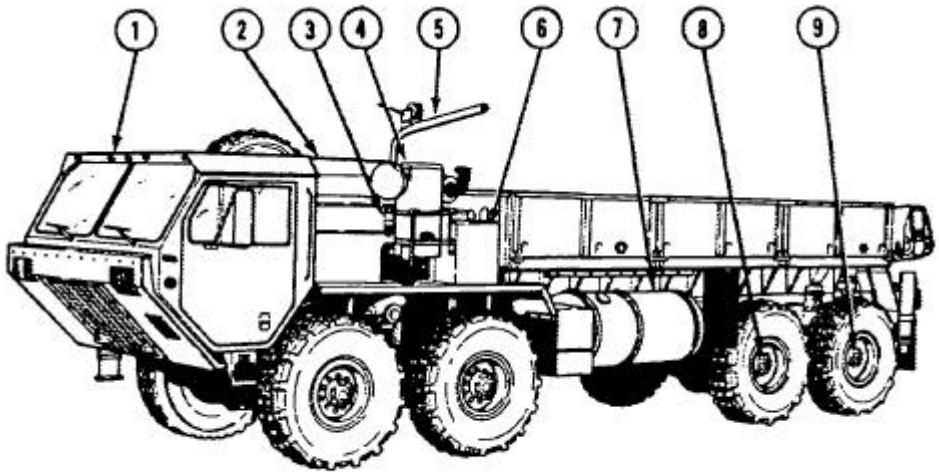
APPENDIX A
PAPER TRANSPARENCIES

THESE PAPER TRANSPARENCIES ARE TO BE REPLICATED AS PLASTIC TRANSPARENCIES FOR USE WITH AN OVERHEAD PROJECTION SYSTEM.

EACH TRANSPARENCY IS NUMBERED AT THE TOP. THAT NUMBER IS IDENTIFIED IN THE BODY OF THE LESSON OUTLINE. FOR EXAMPLE, HEMTT 1-1 THROUGH HEMTT 1-10 ARE REQUIRED FOR THE FIRST LESSON OUTLINE.

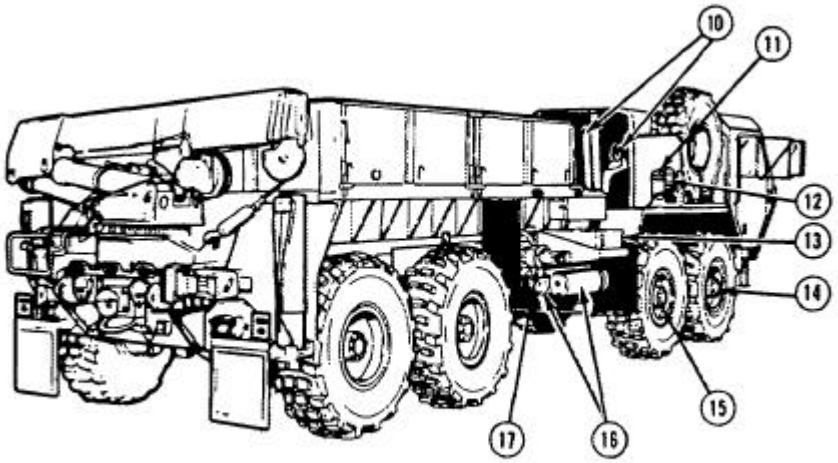
HEMTT 1-1
MAJOR COMPONENTS



LEFT FRONT VIEW

1. PERSONNEL CAB
2. ENGINE COMPARTMENT
3. ETHER CANISTER
4. AIR CLEANER
5. TIRE DAVIT
6. HYDRAULIC RESERVOIR
7. FUEL TANK
8. NO. 3 DRIVING AXLE
9. NO. 4 DRIVING AXLE

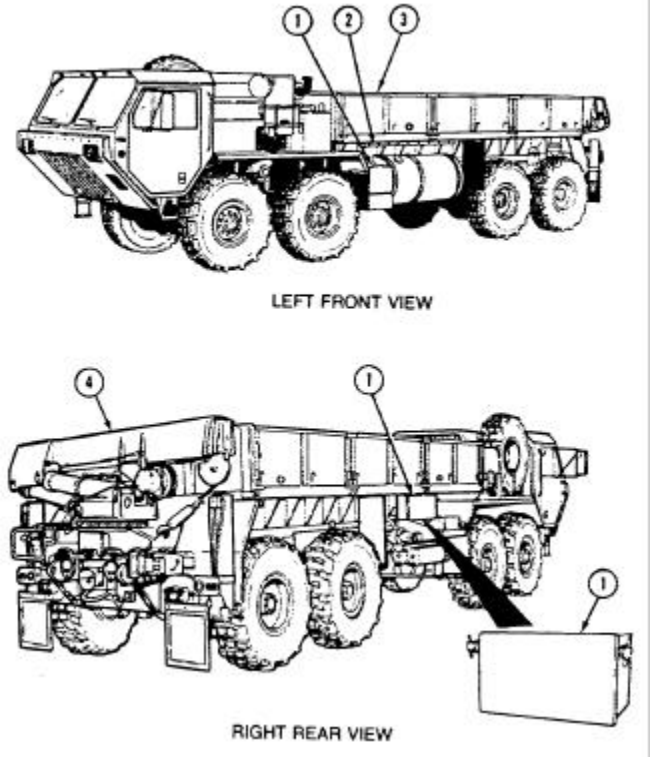
HEMTT 1-2
MAJOR COMPONENTS



RIGHT REAR VIEW

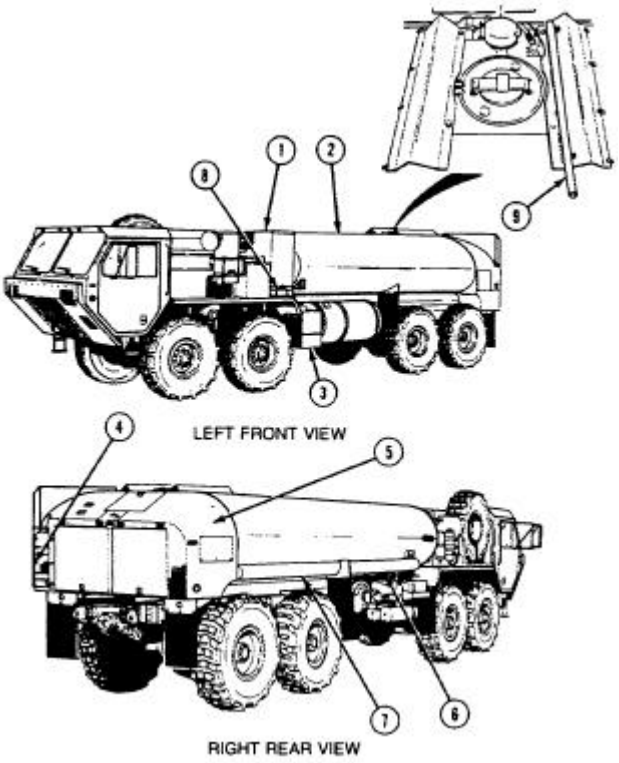
10. TIRE DAVIT (STOWED)
11. AIR DRYER
12. FUEL-WATER SEPARATOR
13. BATTERY BOX
14. NO. 1 DRIVING AXLE
15. NO. 2 DRIVING AXLE
16. AIR RESERVOIRS
17. SELF-RECOVERY WINCH (20% OF FLEET)

HEMTT 1-3
MAJOR COMPONENTS



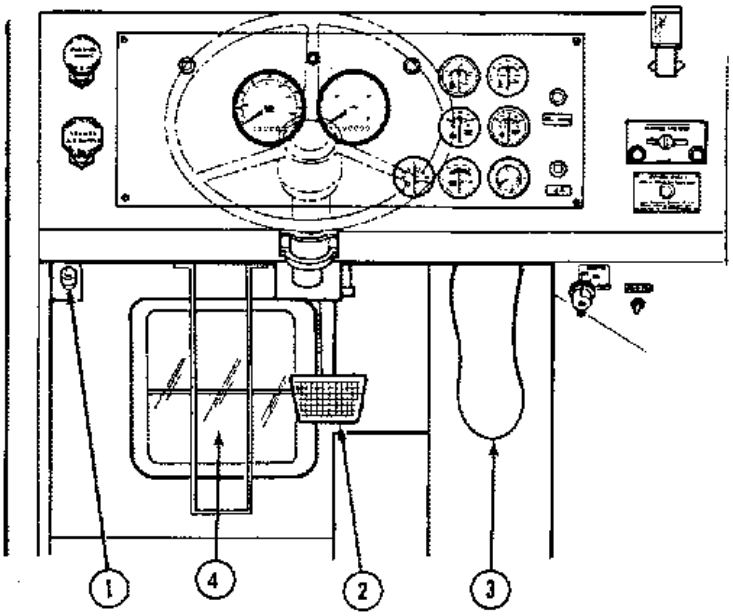
1. STOWAGE BOXES
2. ACCESS LADDER
3. CARGO BODY
4. MATERIAL HANDLING CRANE

HEMTT 1-4
MAJOR COMPONENTS



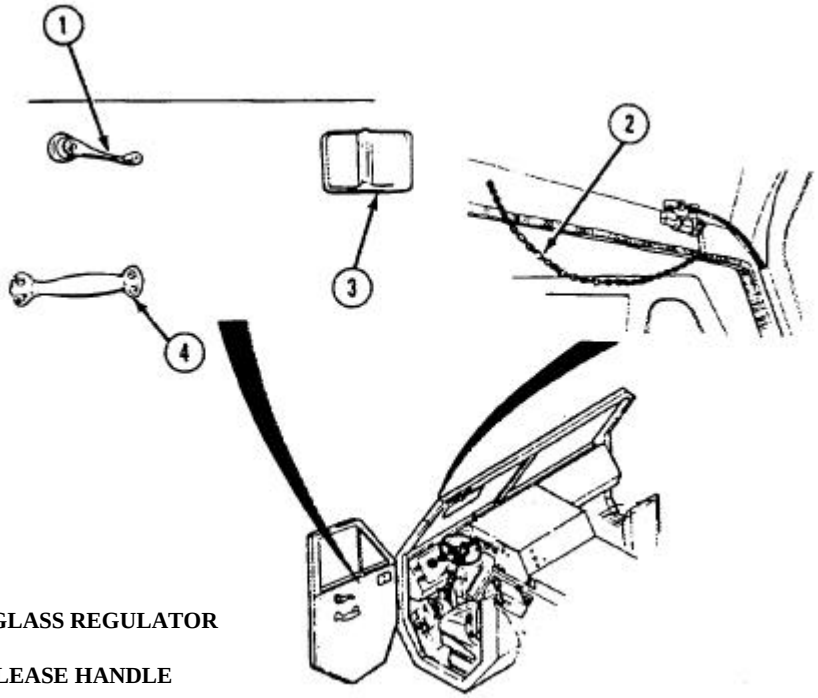
1. STOWAGE BOX
2. TANK
3. STOWAGE BOX
4. TANK ACCESS LADDER
5. PUMP MODULE
6. ACCESS LADDER
7. STOWAGE COMPARTMENT
8. CHOCK STOWAGE BOX
9. DIPSTICK STOWAGE TUBE

HEMTT 1-5
FOOT CONTROLS AND LOWER WINDOW



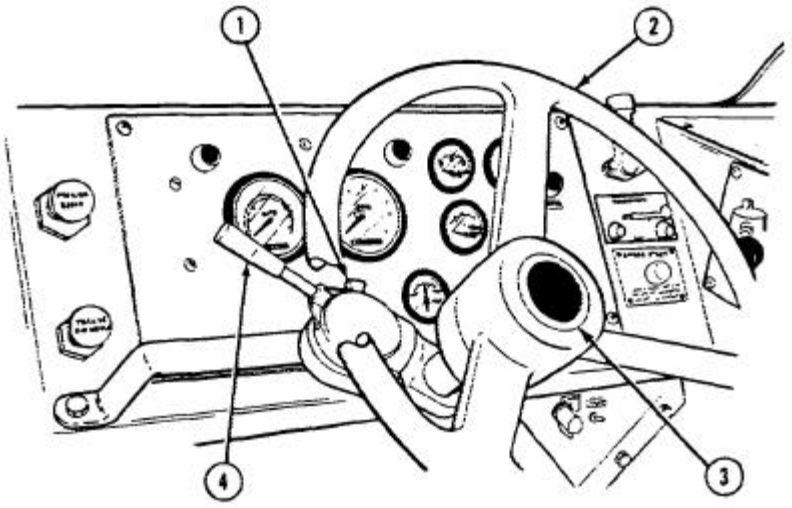
1. HEADLIGHT DIMMER SWITCH
2. SERVICE BRAKE PEDAL
3. ACCELERATOR PEDAL
4. FLOOR WINDOW

HEMTT 1-6
CAB MOUNTED HAND CONTROLS



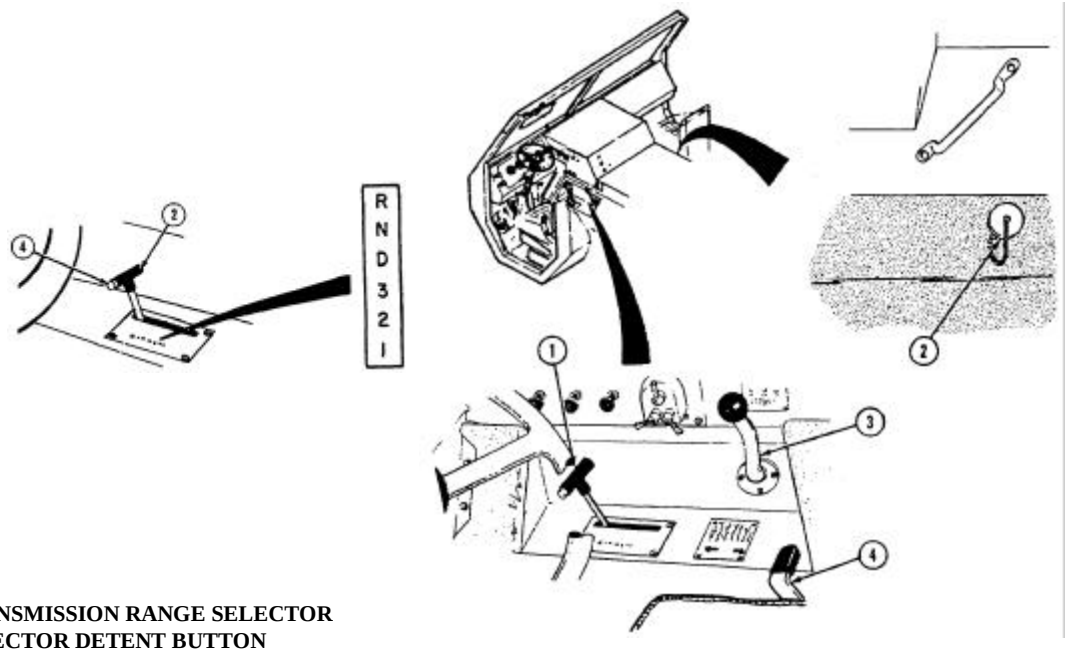
1. CAB DOOR WINDOW GLASS REGULATOR
2. AIR HORN CHAIN
3. CAB DOOR INSIDE RELEASE HANDLE
4. CAB DOOR HANDLE

HEMTT 1-7
STEERING COLUMN MOUNTED CONTROLS



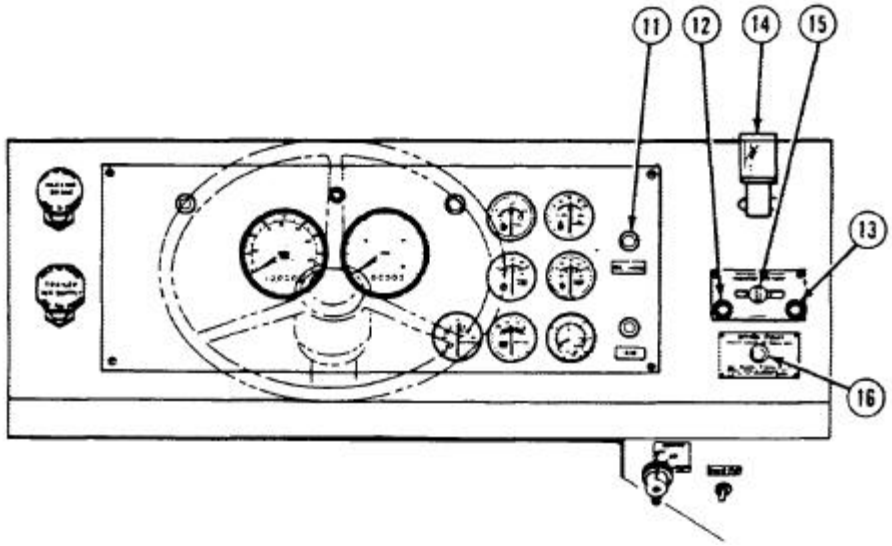
1. EMERGENCY FLASHER CONTROL
2. STEERING WHEEL
3. HORN BUTTON

HEMTT 1-8
TUNNEL PANEL CONTROLS



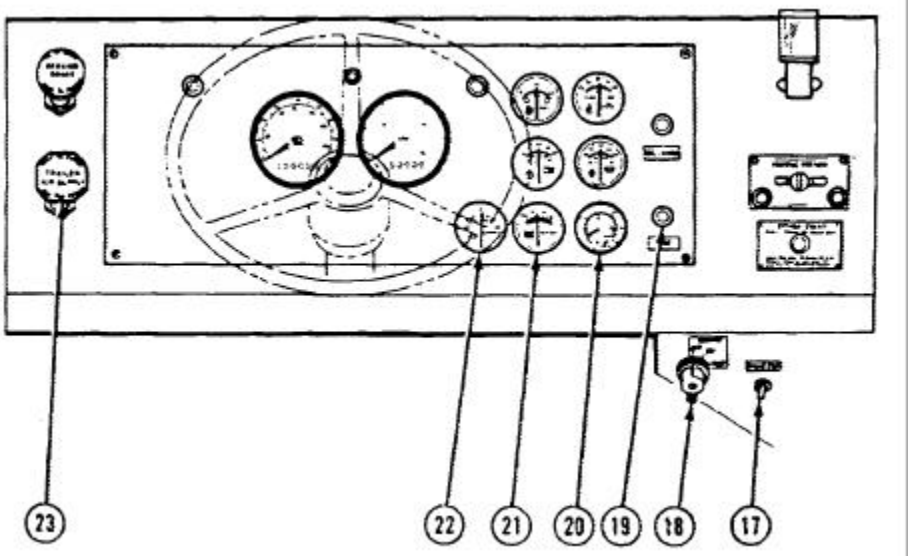
1. TRANSMISSION RANGE SELECTOR
2. SELECTOR DETENT BUTTON
3. STE/ICE RECEPTACLE
4. TRANSFER CASE SHIFT LEVER
5. SELF-RECOVERY WINCH LEVER

HEMTT 1-10
INSTRUMENT PANEL CONTROLS AND INDICATORS



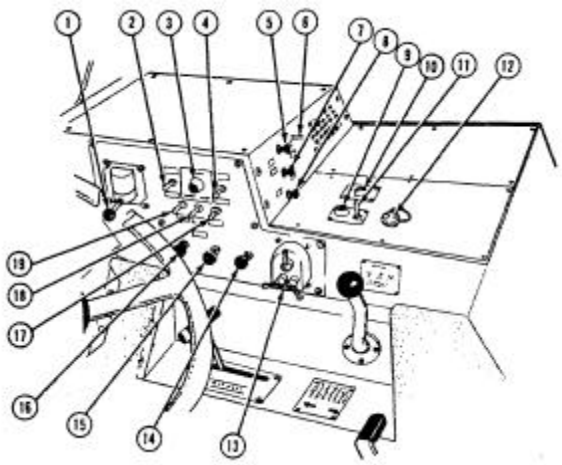
11. OIL-WATER INDICATOR
12. INTER-AXLE DIFF. LOCK INDICATOR
13. 8X8 DRIVE INDICATOR
14. AIR FILTER RESTRICTION INDICATOR
15. TRACTION CONTROL
16. ETHER START CONTROL

HEMTT 1-11
INSTRUMENT PANEL CONTROLS AND INDICATORS



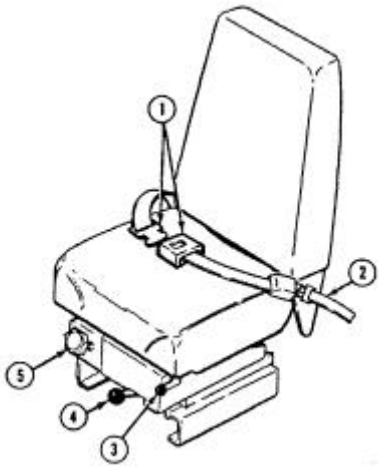
17. ENGINE STOP SWITCH
18. ENGINE START SWITCH
19. AIR INDICATOR
20. AIR PRESSURE GAUGE
21. BATTERY GAUGE
22. AMPERES GAUGE
23. TRAILER AIR SUPPLY CONTROL

HEMTT 1-12
HEATER COMPARTMENT CONTROLS AND INDICATORS



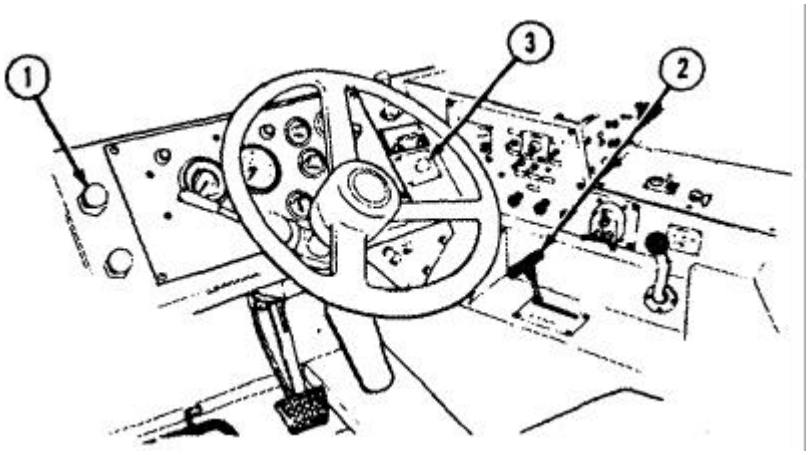
1. TRAILER HANDBRAKE CONTROL
2. JACOBS ENGINE BRAKE ON-OFF SWITCH
3. JACOBS ENGINE BRAKE INDICATOR
4. JACOBS ENGINE BRAKE HIGH-LOW SWITCH
5. AIR CONTROL
6. FAN CONTROL
7. HEAT CONTROL
8. DEFROST CONTROL
9. PTO ENGAGE INDICATOR
10. CRANE OUTRIGGER EXTENDED INDICATOR
11. PTO ENGAGE CONTROL
12. UTILITY OUTLET
13. LIGHT CONTROL
14. WASHER CONTROL
15. WIPER CONTROL (RIGHT)
16. WIPER CONTROL (LEFT)
17. WORK LIGHT SWITCH (NA)
18. DOMELIGHT SWITCH
19. CLEARANCE LAMPS SWITCH

HEMTT 1-13
OPERATOR AND CREW SEAT ADJUSTMENT CONTROLS



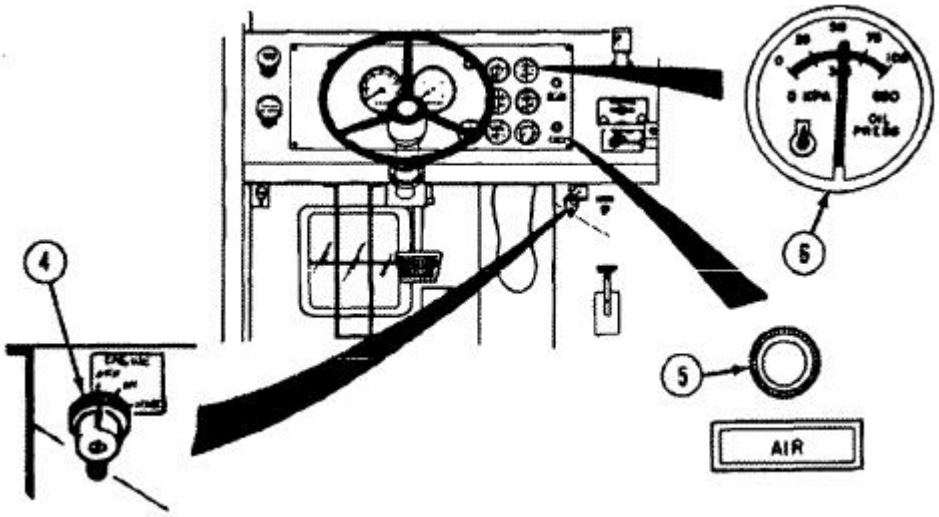
1. SEATBELT
2. SEAT CONNECTOR STRAP
3. HEIGHT ADJUSTMENT CONTROL
4. FORWARD/BACKWARD ADJUSTMENT CONTROL
5. RIDE ADJUSTMENT CONTROL

HEMTT 2-1
ENGINE START



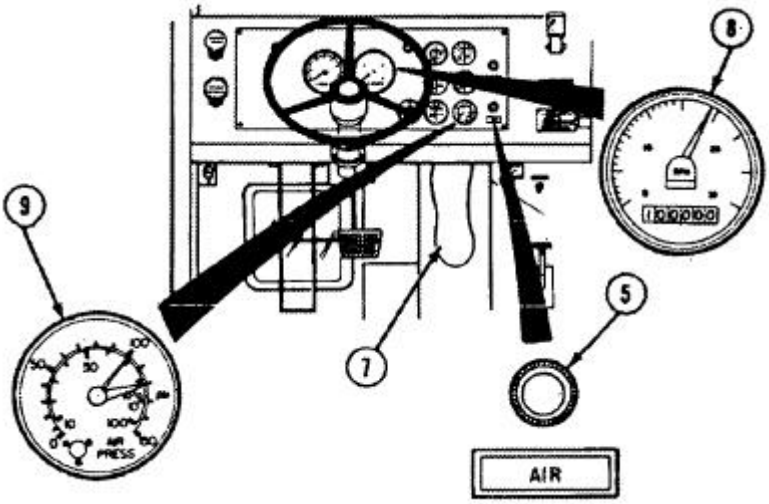
1. PARKING BRAKE CONTROL
2. TRANSMISSION RANGE LEVER
3. ETHER START BUTTON

HEMTT 2-2
ENGINE START



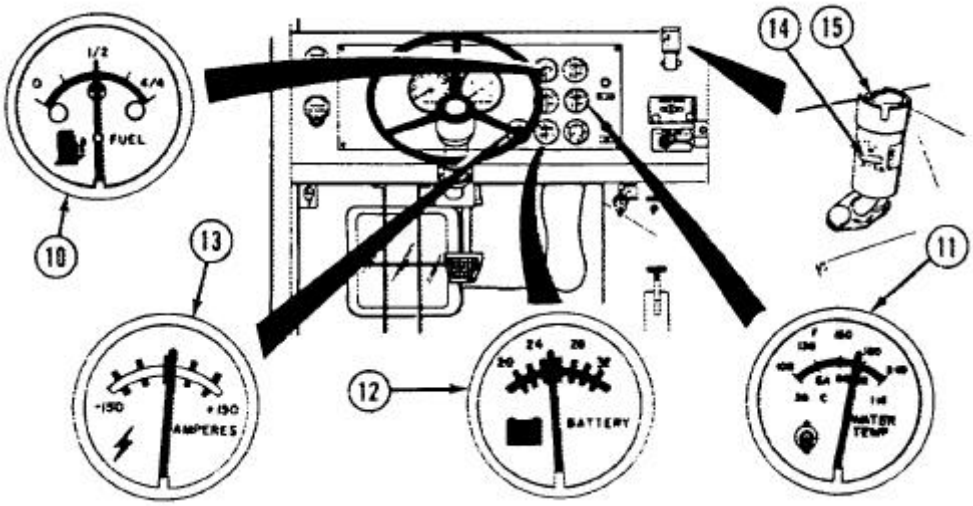
4. ENGINE START SWITCH
5. AIR PRESSURE INDICATOR
6. OIL PRESSURE GAUGE

HEMTT 2-3
ENGINE START



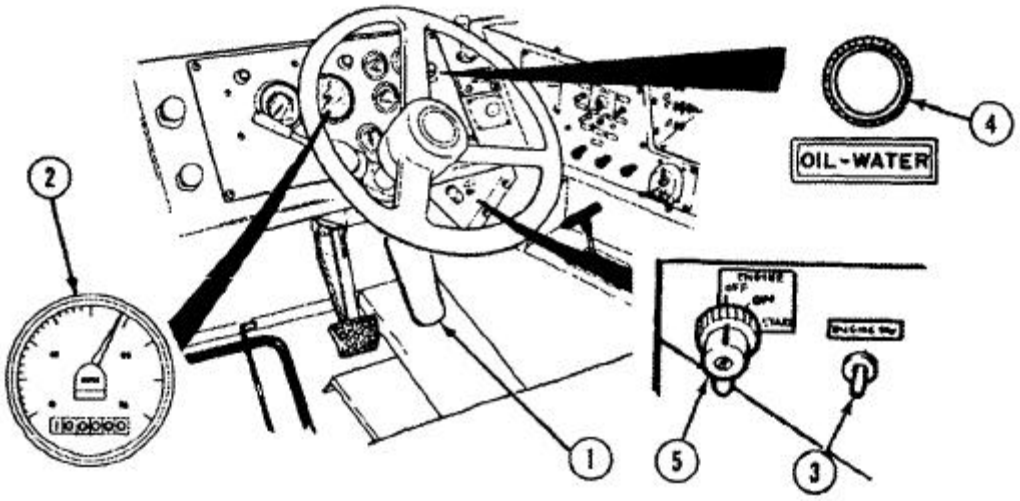
5. AIR PRESSURE INDICATOR
7. ACCELERATOR PEDAL
8. TACHOMETER
9. AIR PRESSURE GAUGE

HEMTT 2-4
ENGINE START



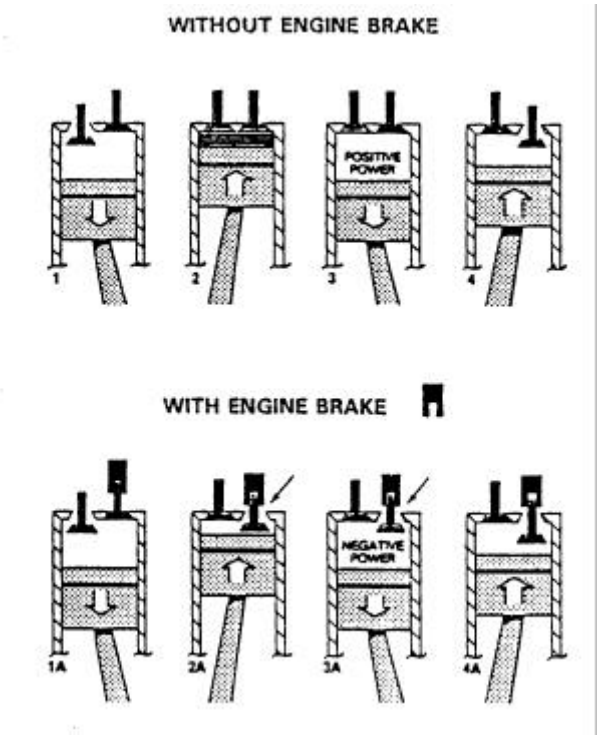
10. FUEL GAUGE
11. WATER TEMPERATURE GAUGE
12. BATTERY GAUGE
13. AMPERES GAUGE
14. AIR FILTER RESTRICTION INDICATOR
15. RESET BUTTON

HEMTT 2-5
ENGINE SHUT OFF

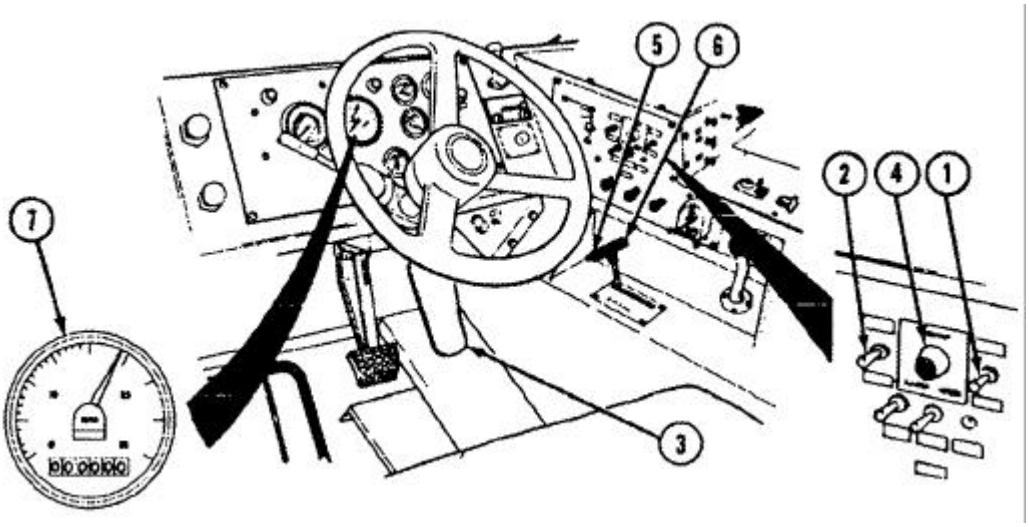


1. ACCELERATOR PEDAL
2. TACHOMETER
3. ENGINE STOP SWITCH
4. OIL-WATER INDICATOR
5. ENGINE SWITCH

HEMTT 3-1
ENGINE BRAKE OPERATION



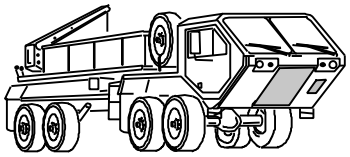
HEMTT 3-2
ENGINE BRAKE OPERATION



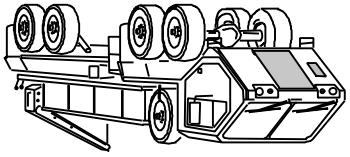
1. ENGINE BRAKE HIGH/LOW SWITCH
2. ENGINE BRAKE ON/OFF SWITCH
3. ACCELERATOR PEDAL
4. ENGINE BRAKE INDICATOR LIGHT
5. SELECTOR DETENT BUTTON
6. TRANSMISSION RANGE SELECTOR
7. TACHOMETER

HEMTT 3-3
ENGINE BRAKE OPERATION GUIDELINES

1. **DO NOT USE ENGINE BRAKE WITH COLD ENGINE.**
2. **SELECT PROPER TRANSMISSION GEAR.**
3. **BE AWARE OF SWITCH POSITIONS.**
4. **USE CORRECT POSITION FOR ROAD SURFACE CONDITIONS.**
5. **GET ACQUAINTED WITH "BRAKING FEEL".**
6. **USE CORRECT GEAR ON DOWNGRADES.**
7. **ALWAYS SHUT OFF SWITCH AFTER USE.**



HEMTT 4-1
CRANE OPERATION



WARNINGS

1. **Do not operate the crane unless both outriggers are set up. Vehicle could turn over causing serious injury or death.**

2. **Keep hands and body away from the outrigger beams while operating the outrigger extension lever or injury could result when the beams come out.**

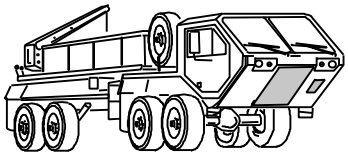
3. **Be careful when removing the outrigger pads from their stowed position. Sharp edges can injure the hands.**

4. **When lowering the outrigger jack cylinders, keep hands and feet clear of the cylinders to avoid injury.**

5. **Do not raise the vehicle tires off the ground with the outrigger jack cylinders. The vehicle could roll causing serious injury or death.**

6. **The crane must be level from side to side. Use of the crane in an unlevel position can cause the vehicle to tip over causing possible serious injury or death.**

7. **Operate the crane from the forward or rear remote control station if the operator will not be able to see the load at all times during crane operation. Failure to control the boom while it is moving could cause serious injury or death.**



HEMTT 4-2
CRANE OPERATION

WARNINGS

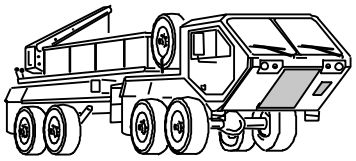
8. **Keep the boom clear of all electrical lines and other obstacles while operating the crane. Serious injury or death could result upon contact.**

9. **Be sure that the area is clear of personnel before moving the swing control lever. The boom should be swung slowly enough so the crane operator has complete control. If the operator cannot see the load during operation, operate the crane from the remote control unit. Failure to control the boom while it is moving could cause serious injury or death.**

10. **The operator must keep control of the load at all times. If necessary, attach cargo tie downs to the load for use as a control tether. Failure to control the load while it is moving could cause serious injury or death.**

11. **Make sure the remote control on/off/MHC-shutdown power switch is in the off position before connecting the remote control unit. Crane moving out of control could cause serious injury or death.**

12. **Be sure there are at least two wraps of cable on the hoist drum at all times. Serious injury or death could result if the cable comes off the hoist drum while lifting a load.**

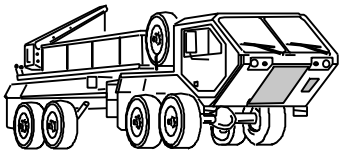


HEMTT 4-3
CRANE OPERATION

WARNINGS

13. The operator should use the remote control unit in a position that the load will not pass overhead. The load could fall causing serious injury or death.

14. If the electrical power fails during crane operation, move the switch on the remote control unit to the shutdown position. Serious injury could result from uncontrolled moving parts.



HEMTT 5-1
WINCH OPERATION

WARNINGS

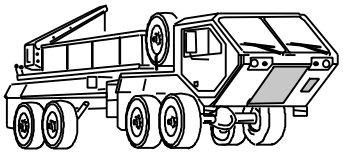
1. **Always wear heavy gloves when handling the winch cable. Never let the moving cable slide through the hands, even when wearing gloves. A broken cable could cut through the glove and cut the hand severely.**

2. **Never operate the winch with less than five wraps of cable on the winch drum. Serious injury or death could result if the cable comes off the drum while winching.**

3. **Avoid quick, jerking winch operation. Keep other personnel well away from the vehicle involved in the winching operation. A snapped cable or shifting load can cause serious injury or death.**

4. **Do not operate the winch while personnel are working on or around the tensioning device. Severe injury to arms, hands, and fingers may result if the cable moves while working with the cable and tensioning device.**

5. **Keep all personnel clear of the area near the cable when tension is on the cable (at least one cable length away from and opposite the angle of pull). If the cable breaks, it can cause severe injury or death.**



HEMTT 5-2
WINCH OPERATION

WARNINGS

6. **Do not use the winch to reel the clevis end of the cable through the roller guides. The clevis may catch on the roller guide and cause the cable or roller guide to break. Broken cables or roller guides can cause serious injury or death.**

7. **Keep all personnel clear of the winch area when the winch is reeling in the cable. If hands are caught in the winch or the cable, or if the cable breaks under tension, severe injury or death could occur.**

8. **Do not reel in the cable too tightly. If too much tension is applied, the cable or tiedown ring can break causing severe injury to personnel.**